UPPER RIO GRANDE WATER OPERATIONS MODEL: MODELING RESULTS

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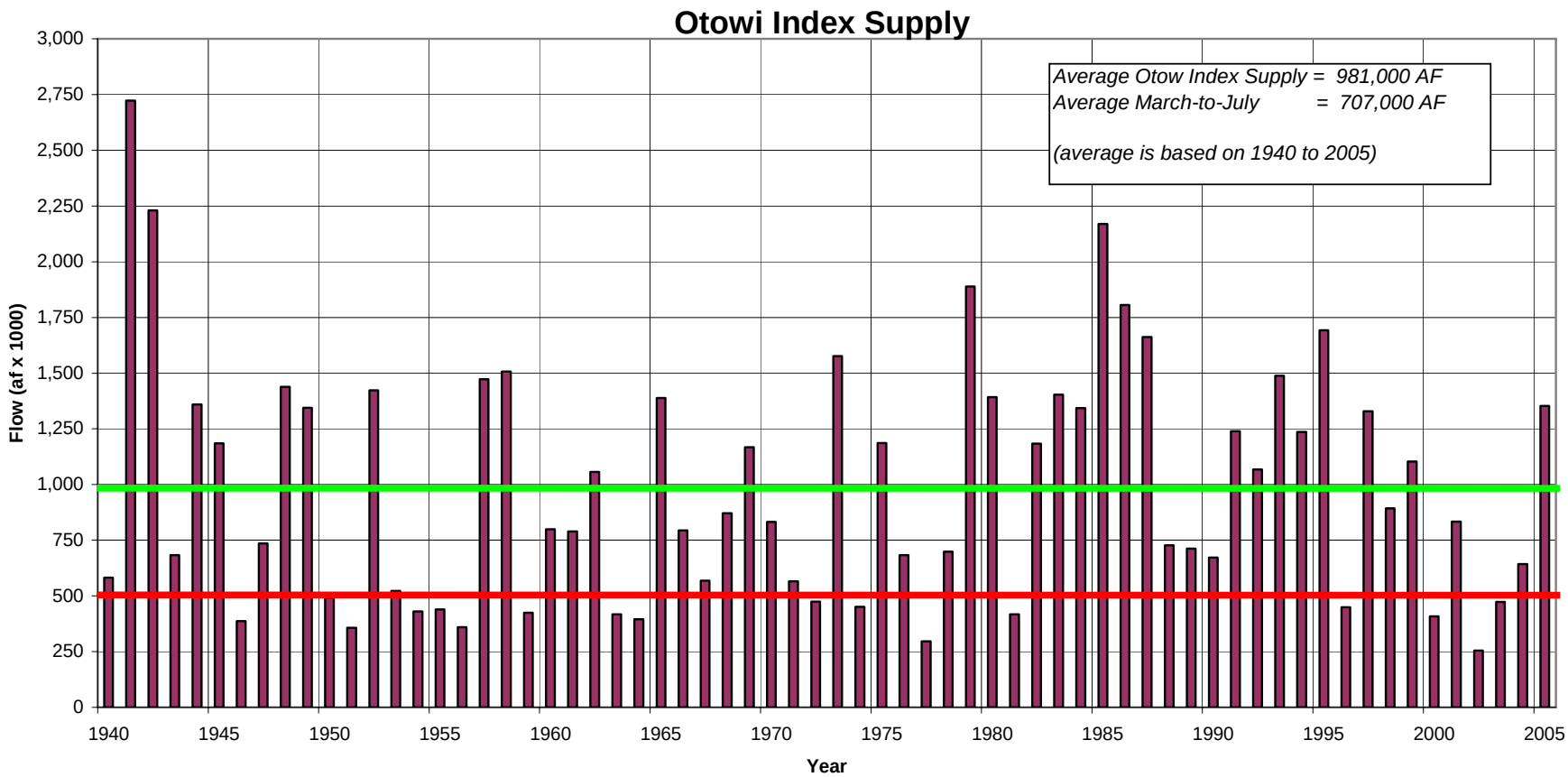
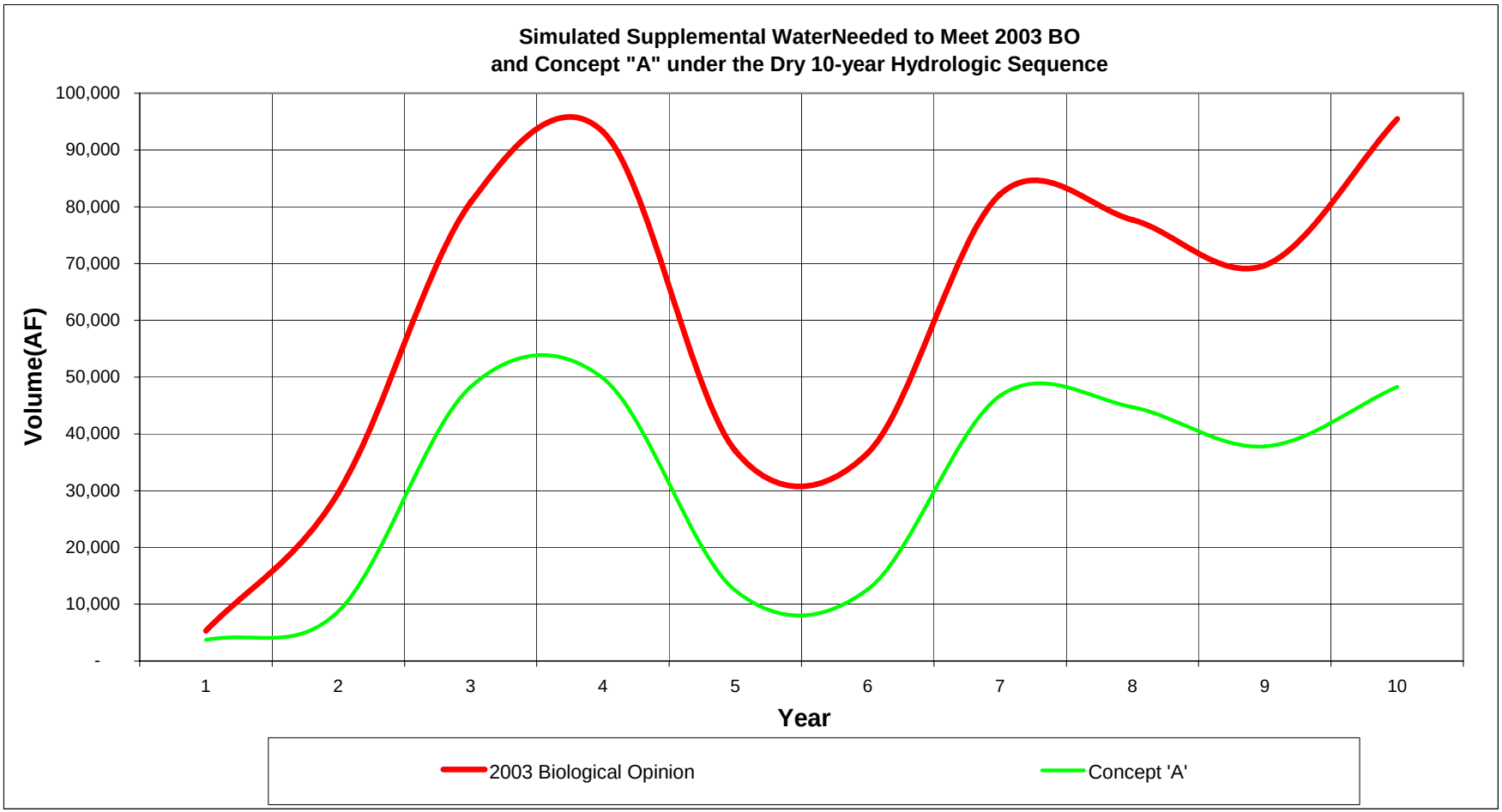
Otowi Index Supply



Results: Dry Ten-Year Snowmelt Runoff Climate Sequence

Supplemental Water Needed for the Dry Sequence



How much storage water would be needed to meet flow targets each year of the sequence?

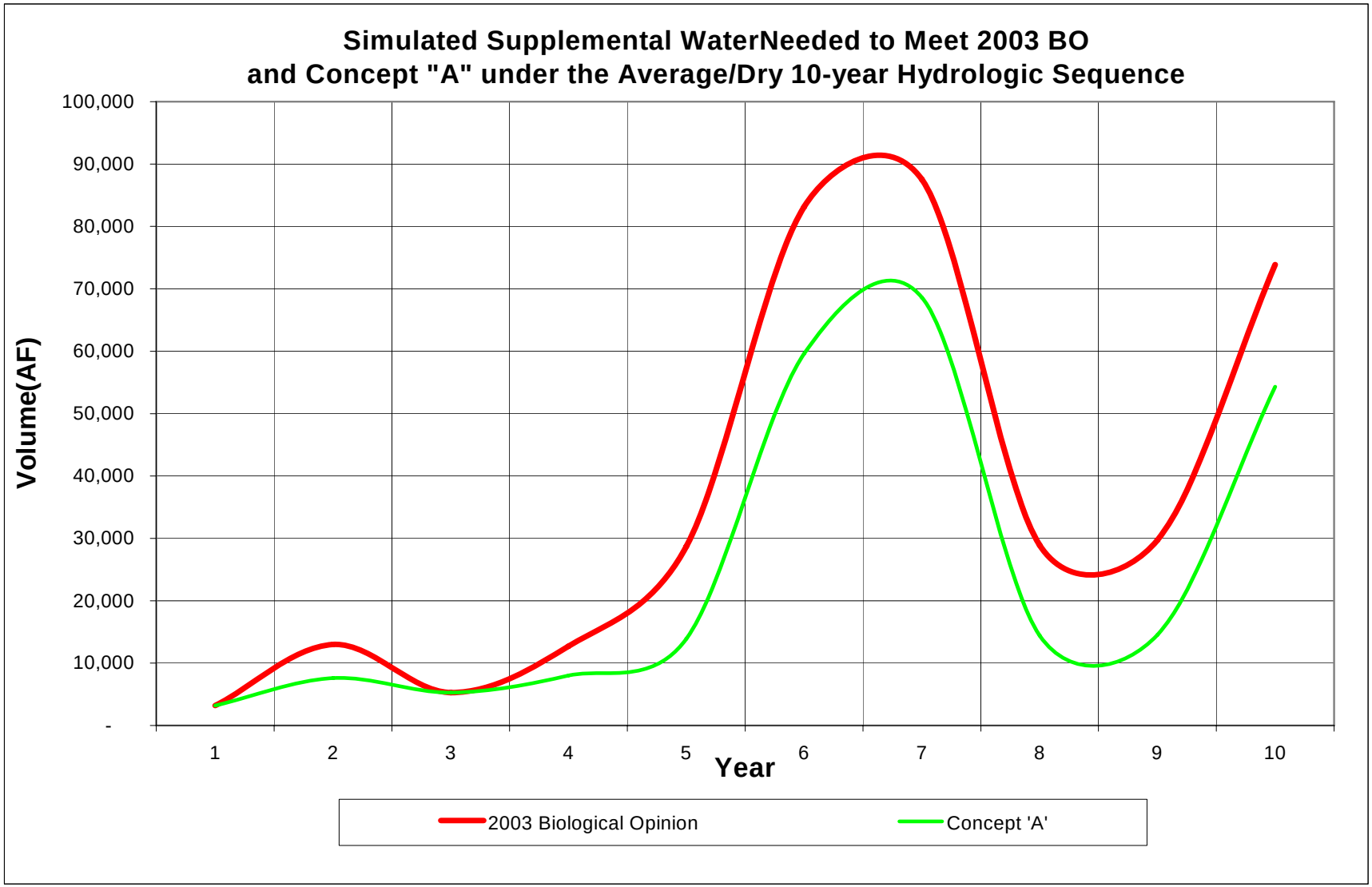
Results for the Dry Sequence

Question: Assuming 50,000 acre-feet of storage water was available initially and 8,000 acre-feet each year thereafter, when would the storage water be exhausted?

Year	Dry 10-year Hydrologic Sequence									
	Native Flow at Otowi	Base			Concept A			Concept "B"		
		Minnow BOY Storage	Minnow Release	Runout Month	Minnow BOY Storage	Minnow Release	Runout Month	Minnow BOY Storage	Minnow Release	Runout Month
	Acre-feet	Acre-feet	Acre-feet		Acre-feet	Acre-feet		Acre-feet	Acre-feet	
1	682,500	50,000	4,900		50,000	3,300		50,000	32,900	
2	713,400	41,600	23,900		43,100	8,200		22,100	12,500	
3	449,100	23,400	23,100	Apr	39,800	38,900	June	16,200	15,700	June
4	296,500	7,900	7,900	RO	7,900	7,900	RO	7,900	7,700	RO
5	713,400	7,900	7,600	RO	7,900	7,500	RO	7,900	2,900	
6	713,400	7,900	7,500	RO	7,900	7,500	RO	12,100	5,800	
7	416,900	8,000	7,900	RO	8,000	7,900	RO	13,100	12,700	RO
8	449,100	5,100	5,100	RO	4,000	3,900	RO	4,800	4,700	RO
9	449,100	7,400	7,300	RO	7,000	6,900	RO	7,300	7,200	RO
10	296,500	7,900	7,900	RO	7,900	7,900	RO	7,900	7,700	RO

Results: Average trending to Dry Ten-Year Snowmelt Runoff Climate Sequence

Supplemental Water Needed for Average/Dry Sequence



How much storage water would be needed to meet flow targets each year of the sequence?

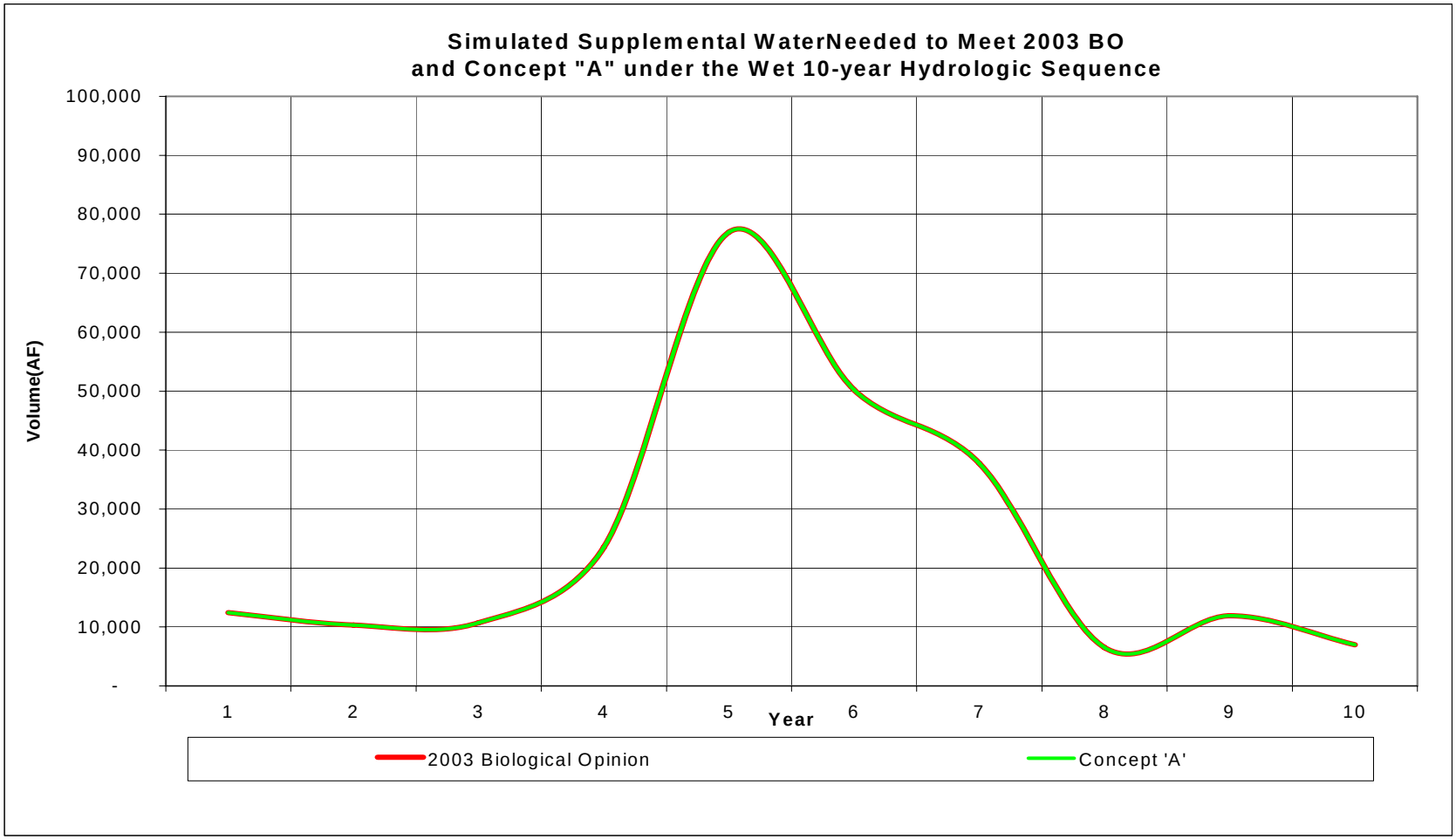
Results for the Average/Dry Sequence

Question: Assuming 50,000 acre-feet of storage water was available initially and 8,000 acre-feet each year thereafter, when would the storage water be exhausted?

Year	Average/Dry 10-year Hydrologic Sequence									
	Native Flow at Otowi	Base			Concept A			Concept "B"		
		Minnow BOY Storage	Minnow Release	Runout Month	Minnow BOY Storage	Minnow Release	Runout Month	Minnow BOY Storage	Minnow Release	Runout Month
		Acre-feet	Acre-feet		Acre-feet	Acre-feet				
1	1,183,500	50,000	3,000		50,000	3,000		50,000	11,200	
2	726,500	44,400	14,200		44,400	7,000		40,200	25,900	
3	1,067,800	36,100	2,200		43,000	2,300		20,700	10,400	
4	682,500	39,500	13,200		46,000	8,300		17,000	14,400	
5	713,400	31,500	28,400		42,400	13,900		9,400	6,400	
6	449,100	9,700	9,400	April	33,200	32,400	May	10,300	9,900	April
7	296,500	8,100	8,100	RO	8,100	8,000	RO	8,100	7,900	RO
8	713,400	7,900	7,500	RO	7,900	7,500	RO	7,900	2,900	
9	713,400	7,900	7,500	RO	7,900	7,500	RO	12,000	3,700	
10	416,900	8,000	7,900	RO	8,000	7,900	RO	14,800	14,200	RO

Results: Wet Snowmelt Runoff Ten-Year Climate Sequence

Supplemental Water Needed for Wet Sequence



How much storage water would be needed to meet flow targets each year of the sequence?

Results of the Wet Sequence

Question: Assuming 50,000 acre-feet of storage water was available initially and 8,000 acre-feet each year thereafter, when would the storage water be exhausted?

Year	Wet 10-year Hydrologic Sequence									
	Native Flow at Otowi	Base			Concept "A"			Concept "B"		
		Minnow BOY Storage	Minnow Release	Runout Month	Minnow BOY Storage	Minnow Release	Runout Month	Minnow BOY Storage	Minnow Release	Runout Month
	Acre-feet	Acre-feet	Acre-feet		Acre-feet	Acre-feet		Acre-feet	Acre-feet	
1	1,103,200	50,000	12,700		50,000	12,700		50,000	1,400	
2	1,805,900	36,200	10,900		36,200	10,900		47,100	-	
3	1,103,200	31,400	11,600		31,400	11,600		52,500	-	
4	1,239,000	26,300	23,500		26,300	23,500		53,100	-	
5	1,392,200	9,400	9,400	April	9,400	9,400	April	52,800	-	
6	1,067,800	7,900	7,500	RO	7,900	7,500	RO	54,400	-	
7	2,169,100	7,900	7,700	RO	7,900	7,700	RO	52,000	-	
8	892,500	7,900	4,900		7,900	4,900		55,800	-	
9	699,000	10,200	9,800	RO	10,200	9,800	RO	56,200	-	
10	892,500	7,900	5,500		7,900	5,500		56,100	-	

Summary Results

Summary Results

- **Little difference between concepts in long-term viability of current Supplemental water supply**
- **Biological results not analyzed**
- **Years with Otowi Index Supply (OIS) < 500,000 af problematic**

Summary Results

- **Anticipated Supplemental water supplies inadequate under any concept due to anticipation of years w/ OIS < 500,000 af**

- **Important to focus on saving water in all years to plan for management in years w/ OIS < 500,000 af**

- **Critical to plan for management in years w/ OIS < 500,000 af**

Otowi Index Supply